

APPENDIX B: MONITOR SETUP EXAMPLE

The following example shows the steps needed to set up SpoolOrganizer on an AS/400. The example shows a typical system, the product Objectives (what the user wants SpoolOrganizer to do), a summary of tasks to perform, and a screen by screen example. **Please note** that certain functions, such as the Microfiche function or Archiving an outq to Tape/Optical, do not require a Monitor and can be done without performing this setup. Refer to the appropriate chapter for examples of these functions.

The Example System

The example system has five printers, **BPRT01** thru **BPRT05** attached to outqs **BPRT01** thru **BPRT05**. The system also has an outq **BJOBLOGS** which is not attached to a printer. The system has **4** user profiles, **QSECOFR**, **QSYSOPR**, **QPGMR**, and **QUSER**.

Certain spool entries which arrive in **BPRT01**, **BPRT02**, and **BJOBLOGS** will be processed by SpoolOrganizer. There is no output in **BPRT03**, **BPRT04**, and **BPRT05** which needs to be processed by SpoolOrganizer. The spool entries to be processed are:

Outq BPRT01

- 1) Inventory Report: Form ID-INV0201, Splfile name-INVLST

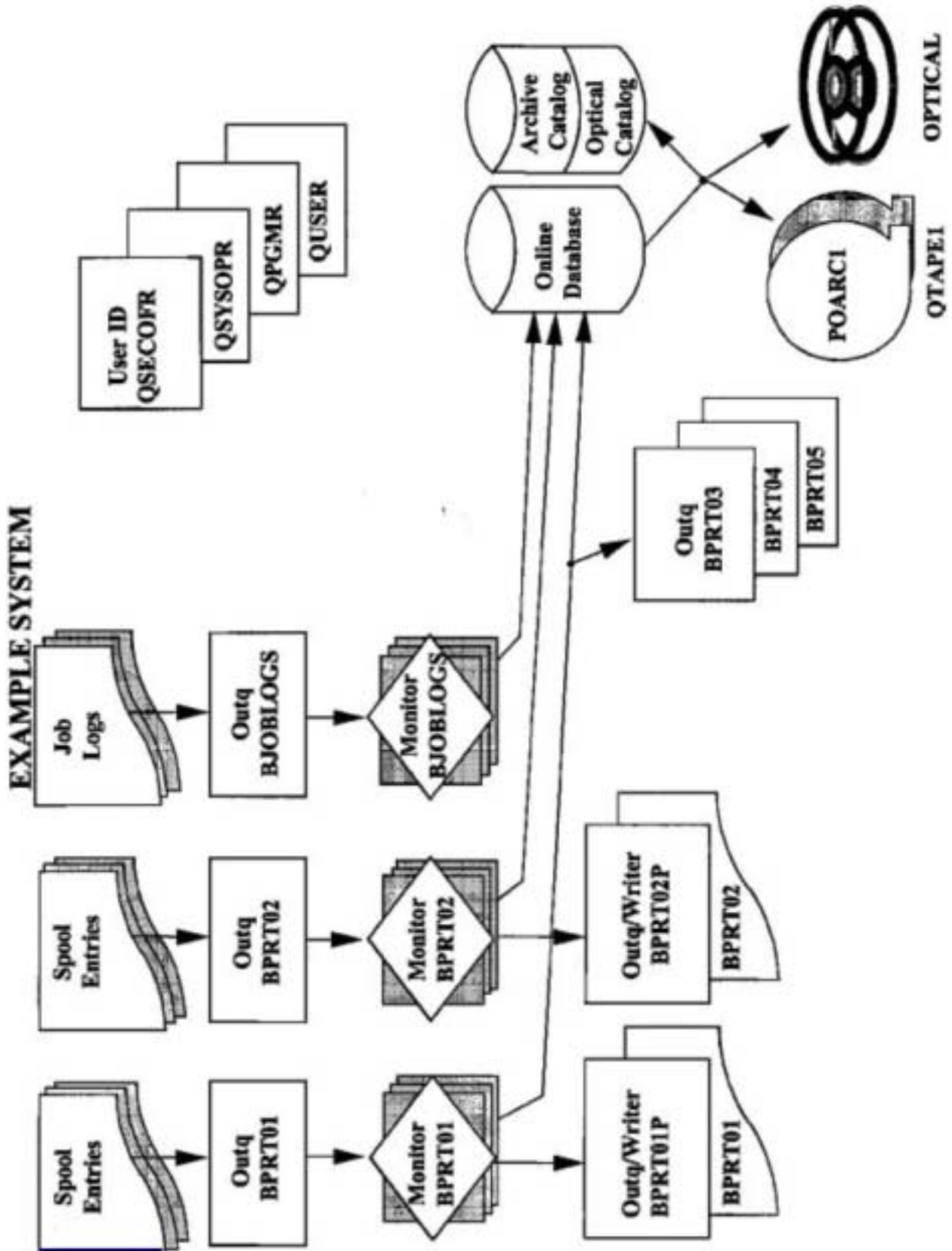
Outq BPRT02

- 2) Purchase Orders: Form ID-PO7055, Splfile name-PO

Outq BJOBLOGS

- 3) Job logs: Splfile name-QPJOBLOG

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Objectives

The following tasks are to be performed by SpoolOrganizer:

- 1) Move all joblogs into the Online Database for **15** days. All users are allowed to look at them. Purge each joblog from the Online Database after **15** days.
- 2) Produce **3** copies of the Inventory report. Move a copy to **BPRT03**, **BPRT04**, and **BPRT05** (the original will print on printer **BPRT01**). Also, place the Inventory Report in the Online Database for 30 days, then archive to Optical Disk. Track the archived spool entries for **2** years. All users can display the Inventory report in the Online Database.
- 3) Place a copy of the Purchase Orders into the Online Database for **30** days, then archive to tape. Track the archived spool entries for **2** years. Allow **QSECOFR**, **QPGMR**, and **QUSER** to display the spool entries.

Note: All other spool entries which arrive in outqs **BPRT01** and **PRT02** are to be printed on printers **BPRT01** and **BPRT02**.

- 4) Create stored search specifications for **QPGMR** to allow him to display purchase orders directly from a menu option. Sort them by date and show the most recent first. Change the list display so that the **USRDTA** (User Data) attribute appears on the list screen for **QPGMR**.
- 5) Allow **QSECOFR** to display or change (attributes) any spool entry in the system.
- 6) Allow only **QSECOFR** to perform setup activities. Allow **QSECOFR** and **QSYSOPR** to perform operational activities. Allow **QPGMR** and **QUSER** to perform user activities.

Task Summary

The following tasks must be done to achieve the objectives above:

- 1) Develop a security table and user IDs.
- 2) Create a new outq for printers **BPRT01** and **BPRT02**.
- 3) Define users.
- 4) Define monitors for outqs **BPRT01**, **BPRT02**, and **BJOBLOGS**.
- 5) Create Outq Distribution List entries to distribute the Inventory report.
- 6) Define Selection Specs to tell the Monitors to process the Inventory report and Purchase Orders.

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- 7) Create Archive/Purge specs to archive the Purchase Orders to tape, to archive the Inventory Report to Optical, to purge joblogs from the Online Database, and to purge the Archive and Optical Catalog.
- 8) Create the Stored Search Specs for **QPGMR**. Place the **DSPOLE** command in the desired menu program.
- 9) Start the monitors **BPRT01**, **BPRT02**, and **BJOBLOGS**.
- 10) On a daily, weekly or monthly basis execute the Archive and Purge procedures. You may wish to place the commands in a **CL** program or include them in an automatic job scheduler.

Detailed Steps

1) Create a security table and user IDs.

Example User IDs:

<u>User</u>	<u>Type</u>
QSECOFR	Security Officer
QSYSOPR	Operator
QPGMR	User
QUSER	User
*PUBLIC	User

Security Codes and their meanings follow. **Please note** the codes below are arbitrary and can be tailored to each installation's needs.

<u>Code</u>	<u>Users</u>	<u>Description</u>
J	all users	Job logs
I	all users	Inventory Report
P	QPGMR, QSYSOPR	Purchase Orders

Note: The **QSECOFR** User ID will be defined with a special code which will allow it to change all spool entries.

2) Create new outqs for **BPRT01** and **BPRT02**.

```
CRTOUQ BRODERICK/BPRT01P TEXT('System Printer')  
CRTOUQ BRODERICK/BPRT02P TEXT('Accounting Printer')
```

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Note: Command **CRTSOEXP** (Create Spool Org. Example) is provided to create outqs **BPRT01** thru **BPRT05** and **BJOBLOGS** into library **BRODERICK**. This will allow the example to simulate your production environment without disrupting your operations. The command also creates a sample Inventory report, PO report, and job log. These objects will be needed to complete this example. To execute enter the following:

BRODERICK/CRTSOEXP

To use the **CRTSOEXP** command, the user must have authority to the following commands:

CRTOUTQ

3) Define Users. (Chapter 4, “Define Users”)

a) Sign on as **QSECOFR**. You must initially sign as **QSECOFR**, even if you want another user profile to be a SpoolOrganizer Security Officer. Once another user profile is defined as a security officer, it can perform all of the following tasks.

b) Add library **BRODERICK** to the library list:

ADDLIBLE BRODERICK

c) Display the SpoolOrganizer Administrator Menu:

SPLADM

d) Select option 1, “Define System” and press **ENTER**. Then select option 1, “Define Users” and press **ENTER**. Press **ENTER** to display all users.

e) Press **F6** (Add a user). The Add/Copy User Definition screen will be displayed.

f) With the cursor positioned at the User ID field, press **F4** (Prompt). A window will be presented, displaying the Library and Name of all User Profiles created on the AS/400.

g) Scroll through the displayed list until User ID Name **QSECOFR** appears in the window. Place a **1** (Select) in the **Opt** field next to User ID Name **QSECOFR**, and press **ENTER**. When you are returned to the Add/Copy User Definition display, the selected value (**QSECOFR**) will be substituted for the User ID field.

Note: The F4=Prompt option is provided on many SpoolOrganizer/400 maintenance displays to allow the selection of previously defined key values, expedite maintenance functions, and assist in the elimination of errors which can cause unexpected results.

h) Press **ENTER**. The “Define Users” maintenance screen will be displayed.

Note: For the purpose of this tutorial, if a field is not specified, accept the default value provided as data for the field.

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i) Enter the following data for the specified fields:

Change Security Table: * (all spool entries)
User Class: **S** (Security Officer)
Press **ENTER**

j) Repeat the above described steps (**f** thru **h**), substituting the following data for the specified fields on the appropriate screens:

“Add/Copy User Definition” Display “Define Users” Display

User ID: **QSYSOPR** Read Security Table: **P**
User Class: **O** (Operator)

Press **ENTER** after entering the data on each screen.

User ID: **QPGMR** Read Security Table: **P**
User Class: **U** (User)

Press **ENTER** after entering the data on each screen.

User ID: **QUSER** User Class: **U** (User)

Press **ENTER** after entering the data on each screen.

User ID: ***PUBLIC** Read Security Table: **J I**
User Class: **U** (User)

Press **ENTER** after entering the data on each screen.

Note: The ***PUBLIC** User ID above will:

- + Allow users not explicitly enrolled in SpoolOrganizer to access the system as type user.
- + Allow all users read access to spool entries with codes **J** (Joblogs) and **I** (Inventory report)

k) After creating the User Definitions, press **F12** to exit Add mode. Press **ENTER** to return to the “Define System Menu”.

4) Define Monitors for outqs BPRT01, BPRT02, and BJOBLOGS. (Chapter 5, “Define Monitors”)

- a)** Select option **2** “Define Monitors” and press **ENTER**. Press enter to display all defined Monitors.
- b)** A list of all Monitors will appear. Press **F6** (Add a monitor)

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c) Monitor: BPRT01
Press ENTER

d) From Outq: **BPRT01** **BRODERICK**
 Descr. Text: System Printer
 To Outq: **BPRT01P** **BRODERICK**
 Press **ENTER**

e) The Add Monitors screen appears. Monitor: **BPRT02**
 Press **ENTER**

f) From Outq: **BPRT02** **BRODERICK**
 Descr. Text: Accounting Printer
 To Outq: **BPRT02P** **BRODERICK**
 Press **ENTER**

g) The Add Monitors screen appears. Monitor: **BJOBLOGS**
 Press **ENTER**

h) From Outq: **BJOBLOGS** **BRODERICK**
 Descr. Text: System Printer
 To Outq: *DLT
 Online DB Per: **ND 15**
 Arc Cat Per: **DT 19900101**
 Read Sec Table: **J**
 Chg Sec Table: **J**
 Press **ENTER**

i) The Add Monitor screen appears. Press **F12**.

j) A list of your Monitors appears. Press **ENTER** to return to the "Define System Menu".

5) Create Outq Distribution List entries to distribute the Inventory Report. (Chapter 7, "Define Outq Distribution Table")

a) Select option 5, "Define Outq Distribution Table" and press **ENTER**. Press **ENTER** to display all entries.

b) A list of outq distribution entries will appear. Press **F6** (Add an outq distribution entry).

c) List Name: **INV**
 Seq: **100**
 Press **ENTER**

To Outq: **BPRT03** BRODERICK
 Descr. Text: To Sales Printer
 Press **ENTER**

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d) List Name: **INV**
Seq: **200**
Press **ENTER**

To Outq: **BPRT04** **BRODERICK**
Descr. Text: To Engineering Printer
Press **ENTER**

e) List Name: **INV**
Seq: **300**
Press **ENTER**

To Outq: **BPRT05** **BRODERICK**
Descr. Text: To Administration Printer
Press **ENTER**

f) Press **F12** to exit Add mode. Press **ENTER** to return to the “Define System Menu”.

6) Define Selection Specs to tell the monitor to process the Inventory Report and Purchase Orders. (Chapter 6, “Define Selection Criteria”)

a) Select option **3** “Define Monitors Selection Criteria” and press **ENTER**. Press **ENTER** to display all Selection Specs.

b) Press **F6** (Add a Monitor Selection Criteria)

c) **Note:** For this example we will not need the **ID** field and will leave it blank. Enter Monitor/ID/Seq. Number:

BPRT01 (Blank) **100**
Press **ENTER**

d) Spool File Name: **INVLST**
Form ID: **INV0201**
Descriptive Text: **Inventory Report Selection Spec**
To Outq: **BPRT01P**
Library: **BRODERICK**
Outq Dist. List: **INV**
Online DB Per: **ND 30**
Arc Cat Per: **NY 2**
Read Sec Table: **I**
Chg Sec Table: **I**
Press **ENTER**

Note: When defining the selection criteria, specify only enough fields to uniquely identify the spool entry(s). For example if the Inventory listing is the only spool entry in the system with a spool file name

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of **INVLST**, the Jobname parameter would not be needed.

e) The Add screen appears. Enter Monitor/ID/Seq. Number:

BPRT02 (blank) **100**

Press **ENTER**

f) Spool File Name: **PO**

Form ID: **PO7055**

Descriptive Text: Purchase Order Report Selection Spec

To Outq: **BPRT02P**

Library: **BRODERICK**

Online DB Per: **ND 30**

Arc Cat Per: **NY 2**

Read Sec Table: **P**

Chg Sec Table: **P**

Press **ENTER**

g) The add screen appears. Press **F12**.

h) The List screen appears. Press **ENTER** to return to the "Define System Menu".

7) Create Archive/Purge specs to archive the Purchase Orders to tape, To Archive the Inventory Report to Optical Disk, to purge joblogs from the Online Database, and to purge the Archive Catalog. (Chapter 8, "Defining Archive or Purge Specifications")

a) Select option **6**, "Define Archive/Purge Criteria"

Fill out the screen as follows:

A/O	Field	Rel	Value	UC	Wild
	4	EQ	INVLST		
A	3	EQ	INV020		

Name to Save or Restore **INV**

Text: Inventory Reports

Press **F9** (Save)

Fill out the screen as follows:

A/O	Field	Rel	Value	UC	Wild
	4	EQ	PO7055		
A	3	EQ	PO		

Name to Save or Restore: **PO**

Text: Purchase Orders

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Press **F9** (Save)

Fill out the screen as follows:

A/O	Field	Rel	Value	UC	Wild
	3	EQ	QPJOBLOG		

---Space out the second line ---

Name to Save or Restore: **QPJOBLOG**

Text: **Joblogs**

Press **F9** (Save)

Press **F3** to exit

8) Create a Heading Spec and Stored Search Specs for QPGMR. Place the **DSPOLE** command in the desired menu program. (Chapter 23, “Search for Spool Entries”)

- a) Select option **11**, “Define Heading Specs” and press **ENTER**. Press enter to display all specs.
- b) A list of heading specs will appear. Place a **3** (copy) by ***DFT** and press **ENTER**.
Name: PGMRHDG
Press **ENTER**.
- c) Place a **2** (change) next to the first and third Opt fields and press **ENTER**.
- d) A screen describing the first heading line appears. Change the field with a **6** (Form ID) to a **14** (user data) and press **ENTER**. Notice that the heading at the top of the screen changes to show the changed format.
- e) Press **F6** to save and exit. Then a screen describing the third heading line appears.
- f) Change the field with a **14** (User Data) to a **6** (Form ID) and press **ENTER**. Notice that the heading at the top of the screen changes to show the changed format.
- g) Press **F6** to save and exit.
- h) The list screen appears. Change the Text field to:
QPGMR Headings
Press **F6** to save and exit.
- i) Press **F12** to exit Copy mode. A list of Heading Descriptions appears Press **ENTER** to return to the Define Systems Menu.
- j) Press **F3** to exit Define Systems Menu. At the Administrative Main Menu, Select Option **3** (End User Functions), and press **ENTER**.
- k) At the User Menu, Select Option **1**, and press **ENTER**. Press **ENTER** on the parameters screen.

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Fill out the search screen as follows:

Ordered by: **7** Asc/Dsc: **D**

A/O	Field	Rel	Value	UC	Wild
	4	EQ	PO7055		
A	3	EQ	PO		

Name to Save or Restore: **PO** User ID: **QPGMR**
Text: **Purchase Orders**

Press **F9** (Save)
Press **F3** to exit.

l) Place the following command in a **CL** program or Menu which is convenient to the end user:

BRODERICK/DSPOLE SRCHSPEC(PO) HDGSPEC(PGMRHDG)

9) Change the IBM printers to use the new outqs, then start the monitors BPRT01, BPRT02, and BJOBLOGS. (Chapter 15, "Monitor Selections")

a) Change the **IBM** Print Writers. Consider (**do not enter**) the following commands:

CHGWTR BPRT01 OUTQ(BPRT01P)
CHGWTR BPRT02 OUTQ(BPRT02P)

Note: In this example, Print Writers **BPRT01** and **BPRT02** were not created. The above commands are presented for illustrative purposes.

b) Start the SpoolOrganizer Monitors. Enter the following commands:

STRSOMON BPRT01
STRSOMON BPRT02
STRSOMON BJOBLOGS

Note: The **STRSOMON** commands may be placed in a **CL** program or Menu.

c) Observe the Monitors. Enter the following command:

WRKACTJOB

You will see Subsystem **BDS**, Your Monitor tasks and some **BDS** internal tasks will be executing within subsystem **BDS**. Periodically press **F5** to refresh until all 3 Monitors enter a status of **DEQW** (Dequeue Wait). The Monitors have initialized and are waiting for spool entries to process. When you are finished, press **ENTER**.

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Enter the following command and press **ENTER**.

DSPSOMSTS

You will see all Monitors and their statuses.

Note: This command/display is provided as a feature to allow the control of all Monitors from one display. Option 1 starts the selected Monitor(s) via the **STRSOMON** command, and option 4 ends the selected Monitor(s) via the **ENDSOMON** command using the default command parameters.

When you are finished, press **ENTER**.

d) Give the Monitors work to do. Enter the following command:

WRKOUTQ BPRT01

You will notice a spool entry in the outq in a held status. This spool entry was created by the **CRTSOEXP** command entered earlier and will be used to simulate a production Inventory List report. You may wish to place a **'5'** (Display) by the spool entry to display it.

e) Place an **'8'** by the spool entry to display its attributes. Notice that the "File" and "Form Type" values match the values specified when creating the Selection Specification (see step **6** above).

Note: It is very important that the spool entry's attributes match the attributes specified on the Selection Specs. You may wish to review your Monitor Descriptions and Selection Specs to verify. If a change is made to a Monitor or one of its Selection Specs, you must end then restart the Monitor for the change to take effect.

f) Place a **'6'** by the spool entry and press **ENTER** to release it. Press **F5** to refresh. Within a few Moments the spool entry will disappear. This indicates the Monitor has processed the spool entry.

g) Observe the results of Monitor **BPRT01**'s actions. Remember what the Monitor was set up to do:

- + Move the original copy to **BPRT01P** (to print on the system printer).
- + Distribute copies to outqs **BPRT03**, **BPRT04**, and **BPRT05**.
- + Place the entry into the Online Database.

To verify these actions were performed, enter the following commands:

```
WRKOUTQ BPRT01P  
WRKOUTQ BPRT03  
WRKOUTQ BPRT04  
WRKOUTQ BPRT05
```

Notes:

1) It may take a minute for the Monitors to complete processing and place out-put into the desired outqs. If unsure, display active jobs, the Monitors are done when their job is in a **DEQW** status.

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- 2) If output does not appear in the outqs as expected, carefully review the setup. If changes are made to a Monitor or one of its Selection Specs, the Monitor must be ended and restarted for the changes to take effect.
- h) Test Monitors **BPRT02** and **BJOBLOGS**. Display outqs **BPRT02** and **BJOBLOGS**. Release the spool entries created by the command **CRTSOEXP**.
- i) Display the Online Database. Enter the following command (or select option 1 from the End User menu):

DSPOLE

Press **F6** to search. A list of spool entries in the Online Database should appear, including the example Invoice List. You may wish to place a '**5**' (display) by the sample Invoice list to display it.

Note: In a production environment the Online Database may contain thousands of spool entries. The search screen allows the user to query the Online Database. The searches can be saved. (This example creates a search spec for **QPGMR**.)

- j) Press **F11** (view). Notice the change in the display. Keep pressing **F11** until the heading shows "Job Name Job User ...". Press **ENTER** to return to the search screen.
- k) Press **F4** (list saved). A list of Stored Search Specs should appear. Place a **1** (select) by the spec defined for **QPGMR** and press **ENTER**. The stored search spec is loaded.
- l) On the Search screen enter the following:
Heading Specifications: **PGMRHDG**
Press **F6** (search)
- m) Press **F11** a few times. Notice the headings and the attributes displayed are differently (User data is on the first screen and Form ID is on the third). Press **ENTER** to return to the Search Screen. Press **F3** to exit.

10) Create Archive and Purge Procedures . (Chapter 8, "Define Archive/Purge Criteria")

On a daily, weekly or monthly basis execute the Archive and Purge procedures. You may wish to place the commands in a **CL** program or include in an automatic job scheduler.

To Archive Purchase Orders to Tape:

```
ARCOLE ARCID(PO) DEV(QTAPE1) VOL(POARC1) ENDOPT(*UNLOAD)
```

To Inventory Reports to Optical Disk:

```
OPTOLE ARCID(INV) VOL(SPLE) DIRPATH(SPOOL_ENTRIES JUNE INV)
```

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DIROPT(*CREATE)

To Purge Joblogs from the Online Database:

PUROLE ARCID(*ALL)

To purge Purchase Orders from the archive catalog:

PURARCCAT ARCID(PO)

To purge Inventory Reports from Optical Catalog:

PUROPTCAT ARCID(INV)

Note: You may wish to use **ARCID(*ALL)** in this example when purging the Online Database, Optical Catalog, or Archive Catalog.

11) End the Monitors.

Enter the following command:

ENDSOMON *ALL

12) Test Selection Specs. Chapter 6, “Define Selection Criteria”

The **CHKSELSPEC** command will determine which Monitor’s Selection Specification if any will match a specified spool entry.

a) Enter the following command:

WRKOUTQ BPRT01P

Select one of the spool entries and take option **8** (attributes) and press **ENTER**.

b) Write down the values of following attributes:

Job
User
Number
File
Number

Press **ENTER** to exit.

Press **ENTER** to exit the WRKOUTQ screen.

c) Enter the following command and press **F4** to prompt:

CHKSELSPEC

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Enter the Following:

Monitor Name: **BPRT01**

Enter the File, File number , etc. retrieved from **Step b)** above.

Press **ENTER**.

- d)** If the command ends normally, a message (SPO1157) will be displayed identifying the output queue which received the report (BSOCHKSPEC) generated by the command.

13) Clear and Delete outq's created by this example.

Please note that other examples also use the outq's and spool entries created in this example. It is recommended to only clear the outq's and not delete them. To recreate the example spool entries, execute the **CRTSOEXP** command again at a later date. Enter the following:

CLROUTQ BRODERICK/xxxxx

DLTOUTQ BRODERICK/xxxxx

xxxxx: BPRT01, BPRT02, BPRT03, BPRT04, BPRT05, BJOBLOGS

14) Delete SpoolOrganizer Objects.

Delete all descriptions created by this example. Other examples may be affected by the setup performed here.

Note: The Indexing example uses the SpoolOrganizer objects created in this example. Do not delete the objects specified below if you plan on performing the Indexing example.

- a)** Bring up the Administrator Menu (**SPLADM**).
- b)** Select option **1**, "Define System Menu".
- c)** Select each of the following options below. Place a '**4**' (delete) by each object created and then press enter to delete:

Users (Leave **QSECOFR** and your User **ID**)

Monitors

Monitor Selection Criteria

Outq Distribution Table

Archive/Purge Criteria

Heading Specs